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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/565,772	01/09/2007	Pulakesh Mukherjee	284134US0PCT	2380
22850 7590 11/12/2009 OBLON, SPIVAK, MCCLELLAND MAIER & NEUSTADT, L.L.P. 1940 DUKE STREET ALEXANDRIA, VA 22314				
EXAMINER REDDICK, MARIE L				
ART UNIT 1796		PAPER NUMBER		
NOTIFICATION DATE 11/12/2009		DELIVERY MODE ELECTRONIC		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

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### Office Action Summary

**Application No.**

10/565,772

**Applicant(s)**

MUKHERJEE ET AL.

**Examiner**

MARIE REDDICK

**Art Unit**

1796

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 30 June 2009.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-14 and 16 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-14 and 16 is/are rejected.
- 7) ☒ Claim(s) 1,3-6,12 and 13 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SI/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

## **DETAILED ACTION**

### ***Claim Objections***

1. Claims 1, 3-6, 12 and 13 are objected to because of the following informalities: i) in claim 1 (b) @ line 14, claim 3 @ line 3, claim 4 @ line 3, claim 6 @ line 7 and claim 13 (b) @ line 15, it is believed that use of "free carboxyl groups or" in lieu of "a free carboxyl group and" is proper; ii) in claim 5 @ line 7, it is believed that "groups or" in lieu of "groups and" is proper. Appropriate correction is required.

### ***Claim Rejections - 35 USC § 112***

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

2. Claims 1-14 & 16 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

A) The recited "wherein the **at least one** stabilizer comprises..." per claims 1 and 13 constitutes indefinite subject matter as per it not being readily ascertainable, from the language as claimed, as to what exactly constitutes the stabilizer. For example, it is not clear if the stabilizer includes at least one of (a) **and** at least one of (b) or at least one of (a) **or** at least one of (b) since "at least one" includes "one".

B) The recited "at least one polyalkylene glycol" and "at least one polyalkylene glycol blocked at one or both terminal groups..." per claim 2 constitutes indefinite subject matter as per it not being readily ascertainable as to how the "at least one" further limits the

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antecedently recited "a graft polymer of vinyl acetate and/or vinyl propionate on polyethylene glycol" or "a polyethylene glycol blocked at one or both terminal groups...".

C) The recited "one ~~or more~~ graft polymers" and "one ~~or more~~ hydrolyzed copolymers" per claim 5 constitutes indefinite subject matter as per it not being readily ascertainable as to how said "one ~~or more~~" further limits the antecedently recited "a graft polymer" and "a hydrolyzed copolymer", respectively.

D) The recited "the ethylenically unsaturated anionic monomers are acrylic acid and are" per claim 10 and "a dihydric alcohols" per claim 12 engenders grammatically deficient claim language.

### ***Double Patenting***

3. The nonstatutory double patenting rejection is based on a judicially created doctrine grounded in public policy (a policy reflected in the statute) so as to prevent the unjustified or improper timewise extension of the "right to exclude" granted by a patent and to prevent possible harassment by multiple assignees. A nonstatutory obviousness-type double patenting rejection is appropriate where the conflicting claims are not identical, but at least one examined application claim is not patentably distinct from the reference claim(s) because the examined application claim is either anticipated by, or would have been obvious over, the reference claim(s). See, e.g., *In re Berg*, 140 F.3d 1428, 46 USPQ2d 1226 (Fed. Cir. 1998); *In re Goodman*, 11 F.3d 1046, 29 USPQ2d 2010 (Fed. Cir. 1993); *In re Longi*, 759 F.2d 887, 225 USPQ 645 (Fed. Cir. 1985); *In re Van Ornum*, 686 F.2d 937, 214 USPQ 761 (CCPA 1982); *In re Vogel*, 422 F.2d 438, 164 USPQ 619 (CCPA 1970); and *In re Thorington*, 418 F.2d 528, 163 USPQ 644 (CCPA 1969).

A timely filed terminal disclaimer in compliance with 37 CFR 1.321(c) or 1.321(d) may be used to overcome an actual or provisional rejection based on a nonstatutory double patenting ground provided the conflicting application or patent either is shown to be commonly owned with this application, or claims an invention made as a result of activities undertaken within the scope of a joint research agreement.

Effective January 1, 1994, a registered attorney or agent of record may sign a terminal disclaimer. A terminal disclaimer signed by the assignee must fully comply with 37 CFR 3.73(b).

4. Claims 1-14 and 16 stand provisionally rejected on the ground of nonstatutory obviousness-type double patenting as being unpatentable over claims 1-13, 16 & 17 of copending Application No. 11/914,242. Although the conflicting claims are not identical, they

are not patentably distinct from each other because of reasons clearly set forth in the previous Office Action of 04/06/09, paragraph no. 8.

This is a provisional obviousness-type double patenting rejection because the conflicting claims have not in fact been patented.

***Claim Rejections – 35 USC § 102***

5. The following is a quotation of the appropriate paragraphs of 35 U.S.C.102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

6. The following is a quotation of 35 U.S.C.103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. Claims 1-4, 7-10 and 13, 14 and 16 are rejected under 35 U.S.C.102(b) as anticipated by or, in the alternative, under 35 U.S.C.103(a) as obvious over Hosoda et al (US 4,380,600).

Hosoda et al teach aqueous dispersions and water-diluted products therefrom, advantageously useful in a variety of technological fields such as flocculants, soil conditioners, dispersants, thickeners, cosmetics, etc., produced, basically, by free-radically (co)polymerizing, at a pH of about 12, (a) a specified amount of at least one ethylenically unsaturated monomer capable of forming a water soluble polymer in the presence of at least one stabilizer wherein the ethylenically unsaturated monomer includes anionic monomers such as (meth)acrylic acid, styrenesulfonic acid, etc. and other monomer(s) copolymerizable therewith such as (meth)acrylamide, vinyl acetate, etc. and the stabilizers include water-soluble

polymers, governed by molecular weights of 300 to 10,000,000, such as dextrin, starch, starch derivatives, polyethylene glycol, polypropylene glycol, copolymers of ethylene and propylene glycols, etc., (Abstract, col. 1, lines 7-36, the paragraph bridging cols. 2 & 3, col. 3, lines 16-67, col. 4, lines 1-67, col. 5, lines 1-33 & 38-62, col. 6, lines 50-64 and Runs 2, 15 & 27 of Hosoda et al and claims 1-4, 7-10 & 13, 14 & 16). Hosoda et al therefore anticipate the instantly claimed invention.

Even if it turns out that the Examiner has somehow missed the boat and the instantly claimed invention is not anticipated, it would have been obvious to the skilled artisan, at the time of the invention, to extrapolate, from Hosoda et al, the precisely defined aqueous dispersion, process for the preparation of an aqueous dispersion and method for thickening an aqueous system as per such having been within the purview of the general disclosure of Hosoda et al and with a reasonable expectation of success.

The rejection based on Hosoda et al is made with the understanding that the newly amended claims require the presence of only one stabilizer during the radical polymerization of ethylenically unsaturated monomer(s).

***Claim Rejections – 35 USC § 103***

8. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

9. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S.1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C.103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

10. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C.103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C.103(c) and potential 35 U.S.C.102(e), (f) or (g) prior art under 35 U.S.C.103(a).

11. Claims 5, 6, 11 & 12 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hosoda et al (US 4,380,600) in combination with Carl et al (US 5,840,804).

The disclosure of Hosoda et al is as discussed supra and as applied to claims 1-4, 7-10, 13, 14 & 16. Further, Hosoda et al differ basically from the claimed invention as per the non-express disclosure of an embodiment directed to i) the specifically recited stabilizer(5 & 6) and ii) the use of a crosslinking agent in the free-radical polymerization of the ethylenically unsaturated anionic monomers(11 & 12). However, Carl et al teach the use of x-linking agents, to engender high flocculation efficiency and a high degree of thickening, in the polymerization of ethylenically unsaturated monomers which include anionic monomers such as (meth)acrylic acid, etc. in the

preparation of aqueous dispersions of water-soluble polymers useful as flocculants, dispersants, soil conditioning agents, etc. wherein, said polymerization is carried out in the presence of a polymeric dispersant governed by a MW of 1,000 to 500,000 Daltons which includes dextrans, starch, starch derivatives, polyethylene glycols, copolymers of vinyl acetate and polyethylene glycol, copolymers of polyalkylene glycol and (meth)acrylic acid, etc. and wherein, said crosslinking agents include N,N'-methylene bis (meth)acrylamide, etc. (Abstract, col. 4, lines 5-67 and cols. 5-8 of Carl et al).

Therefore, absent some evidence of unusual or unexpected results, one having ordinary skill in the art, at the time of the invention, would have found it obvious to modify Hosoda et al by using the dispersant and the x-linking agent taught by Carl et al in the radical polymerization of ethylenically unsaturated monomers including anionic monomers and with a reasonable expectation of success. COMBINING EQUIVALENTS KNOWN FOR THE SAME PURPOSE: "It is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition to be used for the very same purpose.... [T]he idea of combining them flows logically from their having been individually taught in the prior art." In re Kerkhoven, 626 F.2d 846, 850, 205 USPQ 1069, 1072 (CCPA 1980).

***Claim Rejections – 35 USC § 102***

12. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.



13. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

14. Claims 1-14 & 16 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Carl et al (US 5,840,804).

Carl et al teach aqueous dispersions of water-soluble polymers formed, basically, by free-radical polymerizing, in an aqueous phase, at least one water-soluble monomer which includes (meth)acrylamide, dimethylaminoethyl(meth)acrylates, etc., anionic monomers such as (meth)acrylic acid, etc., a crosslinking monomer such as di(meth)acrylic compounds, tri(meth)acrylic compounds, tetra(meth)acrylic compounds and (meth)allyl (meth)acrylic compounds, optionally, at least one hydrophobic monomer and ,optionally, at least one amphiphilic monomer in the presence of a polymeric dispersant governed by a MW in the range of 1,000 to 500,000 Daltons wherein, said polymeric dispersant contains functional groups selected from ether, hydroxyl, carboxyl, amino, etc. and include polyethylene glycols, polypropylene glycols, polyvinyl acetates, starch, starch derivatives, dextrans, copolymers of polyethylene glycols and (meth)acrylic acid, salts of (meth)acrylic acid, vinyl acetate, etc. (Abstract, col. 1, lines 9-24, col. 2, lines 6-67, cols. 3-8 and the Runs of Carl et al and claims 1-13 & 16). Carl et al further teach that when the aqueous dispersions are thinned with water, the viscosity increases and the thickening action of the dispersed polymer is substantial and further that the inventive polymer dispersions are advantageously used as thickeners, flocculants, retention agents in paper making,

etc. (col. 10, lines 48-67 of Carl et al and claims 14 & 16). Carl et al therefore anticipate the instantly claimed invention with the understanding that the pH of the Runs would necessarily fall within the claimed pH range. Where the claimed and prior art products are identical or substantially identical in structure or composition, or are produced by identical or substantially identical processes, a prima facie case of either anticipation or obviousness has been established. In re Best, 562 F.2d 1252, 1255, 195 USPQ 430, 433 (CCPA 1977). "When the PTO shows a sound basis for believing that the products of the applicant and the prior art are the same, the applicant has the burden of showing that they are not." In re Spada, 911 F.2d 705, 709, 15 USPQ2d 1655, 1658 (Fed. Cir. 1990). Even if it turns out that the Examiner has somehow missed the boat and the instantly claimed invention is not anticipated, it would have been obvious to the skilled artisan, at the time the invention was made, to extrapolate, from Carl et al, the precisely defined aqueous dispersion, process for the preparation of an aqueous dispersion and method for thickening an aqueous system as per such having been within the purview of the general disclosure of Carl et al and with a reasonable expectation of success. The rejection based on Carl et al is made with the understanding that the newly amended claims require the presence of only one stabilizer during the radical polymerization of ethylenically unsaturated monomer(s).

***Response to Arguments***

15. Applicant's arguments filed 06/30/09 have been fully considered but they are not persuasive.

- A) **As to the rejection under 35 USC 112, 2<sup>nd</sup> paragraph**....While Counsel, in a good faith effort, attempted to remedy the 112, 2<sup>nd</sup> paragraph issues raised in the previous Office Action, New Objections and 112, 2<sup>nd</sup> paragraph issues were created and are as set forth supra.
- B) **As to the OTDP Rejection**.....It is urged that the OTDP rejection is proper and is herein maintained for reasons of record per the previous Office Action of 04/06/09. Counsel's request to hold in abeyance this rejection until the application is in condition for allowance is noted. To this end, since allowability has not been indicated for any of the claims, the OTDP Rejection stands.

### ***Conclusion***

16. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MARIE REDDICK whose telephone number is 2-5816. The examiner can normally be reached on 6:30 am to 3:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, DAVID WU can be reached on 2-1114. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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